

## CLAIMS:

1. A method for correcting defects in X-ray images (R) with the aid of a defect map (D), comprising the steps:
  - a) classification of picture elements (p) on an X-ray image (I) which has been pre-corrected with the current defect map (D) as "potentially defective" if their value (W(p)) differs from the interval ([G<sub>u</sub>, G<sub>o</sub>]) of the picture element values in a neighborhood (n(p)) assigned to it by a specified degree, and the saving of the picture elements (p), thus classified in a candidate map (C<sub>map</sub>);
  - b) refreshing the defect map (D) with all the picture elements (p) from the candidate map (C<sub>map</sub>) which have been classified as "potentially defective" in several X-ray images (I) and which also fulfill other criteria, where appropriate;
  - c) correction of further X-ray images (R) with the aid of the refreshed defect map (D).
2. A method according to claim 1, characterized in that together with the picture elements (p) classified as "potentially defective", the image parameters of the relevant X-ray image (I) are saved in step a), and that each different defect maps are generated for different ranges of values of the specified image parameters.
3. A method according to claim 2, characterized in that the image parameters relate to the beam quality, the dose, the detector temperature and/or the image geometry.
4. A method according to claim 1, characterized in that the value (W(p)) of a picture element (p) in an X-ray image (I) classified as "potentially defective" is corrected in dependence on the values of its neighboring picture elements (n(p)).
5. A method according to claim 1, characterized in that an X-ray image (I) is corrected once again on the basis of the current defect map (D) and the candidate map (C<sub>map</sub>).

6. A method according to claim 1, characterized in that the neighborhood ( $n(p)$ ) assigned to a picture element ( $p$ ) is defined such that it permits the detection of mutually neighboring defective picture elements.

5 7. A method according to claim 6, characterized in that the neighborhood ( $n(p)$ ) assigned to a picture element ( $p$ ) comprises those picture elements ( $p$ ) from a predefined environment whose picture element value lies at least a specified number  $n$  of orders of magnitude below the maximum and/or minimum for all the picture element values in the entire environment.

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8. A method according to claim 1, characterized in that the classification in step a) excludes those picture elements for whose environment the values of the picture elements lie outside a predefined range ( $W_{\min}$ ,  $W_{\max}$ ).

15 9. A method according to claim 1, characterized in that the picture elements ( $p$ ) correspond to individual pixels or groups of pixels, in particular to rows or columns of pixels.

10. A method according to claim 1, characterized in that a picture element ( $p$ ) is classified as "potentially defective" if its value ( $W(p)$ ) is below the minimum or above the  
20 maximum of the values of the picture elements in its neighborhood ( $n(p)$ ).

11. A method according to claim 1, characterized in that the specified criteria in step b) comprise the following: that the picture element ( $p$ ) has at least been examined in a specified number of X-ray images ( $I$ ), that the picture element ( $p$ ) has been classified as  
25 "potentially defective" in at least a specified number of cases, and/or that the picture element ( $p$ ) has been classified as "potentially defective" in at least a specified percentage of the cases examined.

12. A method according to claim 1, characterized in that the defect map ( $D$ ) is  
30 refreshed continuously with the aid of the X-ray images ( $I$ ).

13. Data-processing equipment to correct defects in X-ray images ( $R$ ) with the aid of a defect map ( $D$ ), wherein the data-processing equipment is equipped to perform the following steps:

- a) classification of picture elements (p) on an X-ray image (I) which has been pre-corrected with the current defect map (D) as "potentially defective" if their value (W(p)) differs from the interval ([G\_u, G\_o]) of the picture element values in a neighborhood (n(p)) assigned to it by a specified degree, and saving of the picture elements (p), thus classified in a
- 5 candidate map (C\_map);
- (b) refreshing the defect map (D) with all the picture elements (p) from the candidate map (C\_map) which have been classified as "potentially defective" in several X-ray images (I) and which also fulfill other criteria, where appropriate;
- (c) correction of further X-ray images (R) with the aid of the refreshed defect map (D).